

Appln No. 10/802,642
Amdt date May 25, 2006
Reply to Office action of January 25, 2006

REMARKS/ARGUMENTS

In the Office action dated January 25, 2006, the Examiner objected to the specification and the claims, rejected claim 1 under 35 U.S.C. § 102 and rejected claims 2 and 6 under 35 U.S.C. § 103. Claims 10/1-2 and 11/1-2 were objected to as being dependent upon a rejected base claim, but were deemed allowable if rewritten in independent form including all limitations of the base claim and any intervening claims and rewritten to overcome the rejections under 35 U.S.C. § 112.

By this Amendment, Applicant has amended claims 1, 6, 10 and 11, added claims 34 and 35 and canceled claim 2. Applicant also has canceled non-elected claims 3 - 5, 7 - 9 and 12 - 33. Reconsideration and reexamination are hereby requested for claims 1, 6, 10, 11, 34 and 35 that are now pending in this application.

Response to the Objection to the Specification

The Examiner objected to the specification at page 3, line 31 - page 4, line 12. Applicant has amended the specification as suggested by the Examiner at paragraphs 3 and 7 of the Office action.

Response to the 35 U.S.C. § 112 Rejection of the Claims based on Claim 2

The Examiner rejected claims 2, 6/2, 10/2 and 11/2 under 35 U.S.C. § 112, first paragraph, on the grounds that claim 2 includes a reference to a single switch controller that controls a plurality of switches. Applicant submits that the claimed subject matter is supported by the specification, for example, at page 2, lines 24 - 25 which states, in part: "the switch controller controls the plurality of switches." Nevertheless, to expedite allowance of this application Applicant has canceled claim 2 and the dependencies on claim 2.

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Response to the 35 U.S.C. § 112 Rejection of Claims 10 and 11

The Examiner rejected claims 10/1-2 and 11/1-2 under 35 U.S.C. § 112, second paragraph, on the grounds that the claims refer to a "received reflected wave" rather than a "receive timing interval." Applicant has amended claims 10 and 11 as suggested by the Examiner.

Allowable Subject Matter

The Examiner indicated that claims 10/1-2 and 11/1-2 would be allowable if rewritten in independent form including all limitations of the base claim and any intervening claims and to overcome the rejections under 35 U.S.C. § 112. New claim 34 includes substantially all of the limitations of claim 10/1 modified in independent form and to address the 35 U.S.C. § 112, second paragraph issue. New claim 35 includes substantially all of the limitations of claim 11/1 modified in independent form and to address the 35 U.S.C. § 112, second paragraph issue.

Response to the 35 U.S.C. § 102 Rejection of the Claims

Claim 1 was rejected under 35 U.S.C. 102(b) as being anticipated by Ninomiya et al., U.S. Patent No. 5,940,029 (hereafter referred to as "Ninomiya"). Claim 1 has been amended as set forth above to include, for example, a plurality of switches and switch controllers. Accordingly, amended claim 1 is not anticipated by Ninomiya.

Response to the 35 U.S.C. § 103 Rejection of the Claims

Claims 2, 6/1 and 6/2 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Ninomiya, in view of Mogi et al, U.S. Patent No. 5,159,707 (hereafter referred to as "Mogi") or in view of Lucchi, U.S. Patent No. 4,370,652 (hereafter referred to as "Lucchi"). Claim 2 has been canceled. Claim 6 now depends solely on claim 1.

Ninomiya relates to an array antenna radar apparatus having a single front end shared by a plurality of antennas, a first switch for cyclically connecting the antennas to the front end at a prescribed switching frequency, and a second switch for cyclically connecting the output of the

front end to frequency converters corresponding to the antennas. This circuit thus maintains pairing of a specific antenna with a specific frequency converter. Ninomiya at column 7, lines 5 - 34.

Mogi discloses a diversity receiver whereby signals from multiple antennae may be provided to multiple tuners. The purpose of this receiver to identify the radio stations with the best signal strength (BSM) and to collect RDS network-follow data from a radio broadcast. Mogia at column 1, lines 9 - 33 and column 2, lines 56 - 60.

The cited references considered either independently or in combination do not teach or suggest the apparatus of claim 1. In claim 1, the apparatus comprises a plurality of switches, a plurality of mixers and a plurality of switch controllers, where each mixer and switch controller is associated with a unique one of the switches. In addition, each of the switch controllers is configured to control the switches in a plurality of modes in which timings of turning the switches on and off are different depending on a distance from a target, and is configured to select the IF signal in the plurality of modes for supply to the mixers.

Moreover, Mobi does not even relate to the same field of endeavor as claim 1. Mobi relates to a broadcast radio receiver. In contrast claim 1, relates to a transmit-receive FM-CW radar apparatus controlling the on and off state of switches in a plurality of modes in which timings of turning the switches on and off are different depending on the distance from a target.

Furthermore, one skilled in the art would not have been motivated to combine the references to provide an apparatus as in claim 1. First, the references are not directed to the same problem as claim 1. Ninomiya is directed to matching specific antennae with specific frequency converters. Mogi is directed to identifying radio stations with the best signal strength and collecting RDS data from a radio broadcast. Accorindlgy, one skilled in the art addressing the problems addressed by claim 1 would not have been motivated to use either Ninomiya or Mogi.

Second, there is no teaching or suggestion as to why or how the asserted structure of Mogi should be incorporated into the system of Ninomiya. Applicant submits that such a combination would be contrary to the operation of Ninomiya and would not be operable. For example, Ninomiya states at column 7 that the switching of the first and second switch is

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synchronized. The independent controllers of Mogi would not provide the required synchronization. Hence, one skilled in the art would not be motivated to incorporate Mogi into Ninomiya.

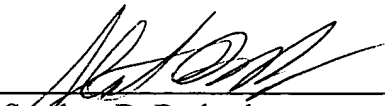
Further, with regard to claim 6, the Examiner stated that Lucchi teaches a receiver apparatus including short and long range modes of operation. However, Lucchi does not teach or suggest that a radar apparatus may control the on and off of switches in a plurality of modes in which timings of turning the switches on and off are different depending on the distance from the target as claimed.

Applicant therefore submits that claims 1 and 6 are patentable over the cited references.

CONCLUSION

In view of the above Applicant submits that the claims are patentably distinct over the cited references and that all the objections/rejections to the claims have been overcome. Reconsideration and reexamination of the above application is requested.

Respectfully submitted,
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